

REMARKS

This paper is responsive to a non-final Office Action mailed December 28, 2004. Prior to this response, claims 7-16, 18-32, 37-41, 43-44, 49-58 and 64-69 were pending. Claims 7-8, 11-16, 18-24, 26, 29-32, 38-41, 43-44, 49 and 65 are now pending. Claims 1-6, 9-10, 17, 25, 27-28, 33-37, 42, 45-48, 50-64 and 66-69 have been cancelled. Claims 7, 11-14, 20, 22-24, 29, 31, 38, 40-41, 43-44, 49 and 65 have been currently amended.

1. Allowed and Allowable Claims

The Office Action indicated that claim 38 is allowed and that claims 12, 22, 28, 40 and 49 are objected to as being allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 12, 40 and 49 were already independent claims. The applicant has made clarifying amendments, which will be discussed below. The applicant asserts that claims 12, 40 and 49 are in condition for allowance.

Regarding claim 22 the applicant has rewritten claim 22 in independent form including all of the limitations of the base claim and any intervening claims. Accordingly, the applicant asserts that claim 22 is now in condition for allowance.

Regarding claim 28, the applicant has rewritten claim 23 to include all of the limitations of claims 23 and 28. Claim 28 previously depended from independent claim 23. There were no intervening claims. Accordingly, the applicant asserts that claim 23 is in condition for allowance.

2. Claims Depending from Allowed or Allowable Claims

Regarding claims 13-16 and 18-21, the applicant has amended claims 13-16 and 18-21 to depend from allowable claim 12. Accordingly, the applicant asserts that claims 13-16 are in condition for allowance.

Regarding claims 24, 26 and 29-32, they now depend from allowable claim 23 (which includes all of the limitations of allowable claim 28). Accordingly, the applicant asserts that claims 24, 26 and 29-32 are in condition for allowance.

Regarding claim 39, claim 39 depends from claim 38, which has been allowed. Accordingly, the applicant asserts that claim 39 is in condition for allowance.

Regarding claims 41 and 43-44, claims 41 and 43-44 depend from allowable claim 40. Accordingly, the applicant asserts that claims 41 and 43-44 are in condition for allowance.

3. Low Side Injection of a Local Oscillator for GPS Mixing

Claims 7, 9, 18, 20, 38, 64, 65, 67 and 69 have been rejected as unpatentable over Camp, Jr. (U.S. Pat. No. 6,097,974), under 35 U.S.C. § 102(b). This rejection is traversed as follows.

The Office Action states in the Response to Arguments, second section 4, that the “high and low side injections of the local oscillator are interpreted as referring to high and low local oscillator frequency bands, respectively.” The interpretation is incorrect. The high and low side injection does not refer to high and low local oscillator frequency bands. Contrarily, the high and low side injection refers to whether the local oscillator is higher or lower than the carrier signal of interest. To use simplified examples for illustration purposes, if a carrier frequency is 1900 MHz and an intermediate frequency is 200 MHz, then a high side injection would mean that the local oscillator frequency is 2100 MHz. That is, in high side injection, the local oscillator is injected at a frequency that is higher than the carrier frequency. A low side injection would mean that the local oscillator frequency is 1700 MHz. That is, in low side injection, the local oscillator is injected at a frequency that is lower than the carrier frequency. Thus, at a single carrier frequency, e.g., 1900 MHz, either high or low side injection can be used.

To continue the example, a transceiver might have two communication bands, a low band and a high band. As discussed above, the first, or high, band might be at 1900 MHz. The low band might be at 800 MHz. Choosing a simple example again, for illustration purposes, the intermediate frequency might again be 200 MHz. Then a high side injection would mean that the local oscillator frequency is 1000 MHz. A low side injection would mean that the local oscillator frequency is 600 MHz. The specification at page 14, line 21 to page 15, line 5 clearly shows this definition of high and low side injection, contrary to the interpretation given in the Office Action. Accordingly, the applicant asserts that claims 7, 18, 20 and 38 are in condition for allowance.

The applicant has cancelled claims 9, 64, 65, 67 and 69 without prejudice. The applicant disagrees with the Office Action's reasons for rejected claims 9, 64, 65, 67 and 69. The applicant reserves the right to prosecute the subject matter of claims 9, 64, 65, 67 and 69 in this or another patent application.

Claims 8 and 11 depend from claim 7, and are therefore allowable for the reasons discussed above with respect to claim 7.

4. Clarity Amendments

Several amendments have been made throughout the claims for clarity as follows. (1) "Coupled" and "coupling" have been replaced with "connected and connecting", respectively, in order to avoid confusion with magnetic coupling. It will be understood that "connected" and "connecting" include connecting through switches or through other components not shown. (2) "Antenna assembly" has been replaced with simply "antenna", since an antenna assembly includes an antenna. (3) Language claiming "one of a member of a group consisting of" has been replaced with "either", to avoid any possible (incorrect) interpretation that no other components are allowed. (4) First and second mixers are indicated as "first" and "second" mixers in claims having two mixers.

5. Cancelled Claims

Claims 9-10, 25, 27, 37, 50-58, 64 and 66-69 have been rejected. The applicant has cancelled claims 9-10, 25, 27, 37, 50-58, 64 and 66-69 without prejudice. The applicant disagrees with the reasons for rejection. The applicant reserves the right to prosecute the subject matter of claims 9-10, 25, 27, 37, 50-58, 64 and 66-69 in this or another patent application.

6. References of Record

The Office Action makes several new reference of record. The applicant has reviewed the references made of record and hereby respectfully asserts that the claimed invention is patentably distinct from the references made of record.

7. Petition for Extension of Time


In accordance with 37 C.F.R. 1.36(a), a credit card payment in the amount of \$120 is enclosed to cover the Petition for Extension of Time fee set forth under 37 C.F.R. 1.17(a)(1).

8. Conclusion

It is believed that the application is in condition for allowance and reconsideration is earnestly solicited.

Respectfully submitted,

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Kathleen L. Connell
Reg. No.: 45,344

Kathleen L. Connell
KYOCERA WIRELESS CORP.
P.O. Box 928289
San Diego, CA 92192-8289
Direct Dial: (858) 882-2169
Direct Fax: (858) 882-2485